



## Applications of Remote Sensing and GIS to Solve Challenges in Autonomous Driving and Analyze Roadway Safety

Guest Editors:

### Dr. Mohammad Aldibaja

Sensing and Perception, SMART  
Mechatronics Research Group,  
Saxion University of Applied  
Sciences, Enschede, The  
Netherlands

### Dr. Zheng Liu

School of Engineering, University  
of British Columbia, Okanagan,  
Kelowna, BC V1V 1V7, Canada

### Dr. Hanbing Wei

School of Mechatronics and  
Automotive Engineering,  
Chongqing Jiaotong University,  
Chongqing 400074, China

Deadline for manuscript  
submissions:

**closed (16 May 2023)**

### Message from the Guest Editors

Dear Colleagues,

The main challenge in autonomous vehicles has become to solve the critical and unique problems such as precise localization in snow–rain road conditions, generating accurate and large maps by SLAM technologies, far detection of construction areas for smooth path planning, maneuvering with the existence of unprotected turns, making a robust decision on classifying stationary vehicles as obstacles or temporarily stopped due to traffic jams and traffic signal recognition in sun glare. Remote sensing and image processing applications play the main role in designing optimal solutions based on sensory and observation data such as modeling the changes in the pattern distribution of LIDAR 3D point clouds in snowfall weather conditions and improving the localization accuracy by matching map observation environmental features. This Special Issue aims to add value to the autonomous vehicle research field by demonstrating and analyzing critical and unique problems of mapping, localization, perception and path-planning modules.

Dr. Mohammad Aldibaja

Dr. Zheng Liu

Dr. Hanbing Wei

*Guest Editors*





an Open Access Journal by MDPI

## Editors-in-Chief

### **Dr. Prasad S. Thenkabail**

Senior Scientist (ST), U. S.  
Geological Survey (USGS), USGS  
Western Geographic Science  
Center (WGSC), 2255, N. Gemini  
Dr., Flagstaff, AZ 86001, USA

### **Prof. Dr. Dongdong Wang**

Institute of Remote Sensing and  
Geographic Information Systems,  
Peking University, Beijing, China

## Message from the Editorial Board

*Remote Sensing* is now a prominent international journal of repute in the world of remote sensing and spatial sciences, as a pioneer and pathfinder in open access format. It has highly accomplished global remote sensing scientists on the editorial board and a dedicated team of associate editors. The journal emphasizes quality and novelty and has a rigorous peer-review process. It is now one of the top remote sensing journals with a significant Impact Factor, and a goal to become the best journal in remote sensing in the coming years. I strongly recommend *Remote Sensing* for your best research publications for a fast dissemination of your research.

## Author Benefits

**Open Access:** free for readers, with article processing charges (APC) paid by authors or their institutions.

**High Visibility:** indexed within Scopus, SCIE (Web of Science), Ei Compendex, PubAg, GeoRef, Astrophysics Data System, Inspec, dblp, and other databases.

**Journal Rank:** JCR - Q1 (Geosciences, Multidisciplinary) / CiteScore - Q1 (General Earth and Planetary Sciences)

## Contact Us

---

*Remote Sensing* Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/remotesensing](http://mdpi.com/journal/remotesensing)  
[remotesensing@mdpi.com](mailto:remotesensing@mdpi.com)  
[X@RemoteSens\\_MDPI](https://twitter.com/RemoteSens_MDPI)